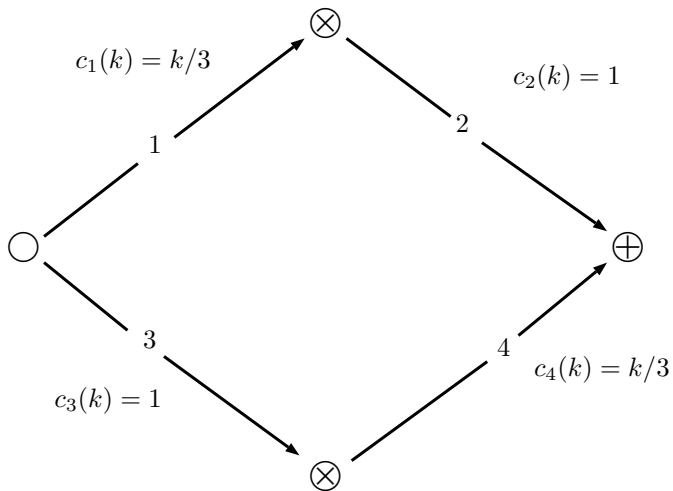# Advanced Microeconomics

P. v. Mouche

Exercises 5

Exercise 1 *Consider the following traffic network.*

a. *Identify for each commuter the strategies.*

b. *Further suppose that there are 2 commuters. Represent this game as a bimatrix game.*

c. *Determine the Nash equilibria.*

Short solutions.

Solution 1 a. Strategy 1 is route choice $1 - 2$. Strategy 2 is route choice $3 - 4$.

b. $\begin{pmatrix} 5/3; 5/3 & 4/3; 4/3 \\ 4/3; 4/3 & 5/3; 5/3 \end{pmatrix}$.

c. This game has two Nash equilibria: $(1, 2)$ and $(2, 1)$. In each Nash equilibrium each player has costs $4/3$.